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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,348	07/31/2003	Sarah Young	11150/76	3597

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EXAMINER	
LIANG, REGINA	
ART UNIT	**PAPER NUMBER**
2674	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/632,348	YOUNG, SARAH	
	Examiner	Art Unit	
	Regina Liang	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/29/03
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 3, 5, 7-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly added paragraph (filed on 1/16/04) on page 4, lines 11-12 does not provide support for the original specification.

The original specification merely disclose "a control signal may be used to generate a convexly shaped region 23". The original specification does not provide support as to how a convexly shaped region (claims 3 and 5) is generated by a control signal.

The specification discloses the actuator layer is deformable in the area by pressing using a force or by touching by a user (the actuator is deformable as a function of a control signal). The specification does not disclose how the actuator layer is deformable as a function of an electrical field, electromagnetic field or optical signal, e.g., light.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Cross et al (US. PUB. NO. 2003/0234759 hereinafter Cross).

The recitation that "a steering wheel", "a passenger compartment of a motor vehicle" and "a motor vehicle" (claims 20-22) has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kropa v. Robie*, 88 USPQ 478 (CCPA 1951).

As to claims 1, 20-22, Fig. 8 of Cross discloses a display device comprising a display (display 808), an actuator layer (touch sensor) arranged on the display. Fig. 1B of Cross teaches the actuator layer (touch sensor) including an operating surface geometry deformable as a function of a control signal (the layer 110 is deformable when touched by a user or due to a touch force).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4-6, 11-13, 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palalau et al (US. PAT. NO. 6,373,472 hereinafter Palalau) in view of Cross.

As to claim 1, Fig. 1 of Palalau discloses a display device comprising a display (touch screen display 148, col. 7, lines 15-49), an actuator layer (touch screen 32, 36) arranged on the display.

Palalau does not disclose the actuator layer including an operating surface geometry deformable as a function of a control signal. However, Cross an actuator layer (touch sensor) arranged on the display. Fig. 1B of Cross teaches a touch panel device having an actuator layer (touch sensor) including an operating surface geometry deformable as a function of a control signal (the layer 110 is deformable when touched by a user or due to a touch force). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the touch screen of Palalau to have an actuator layer including an operating surface geometry deformable as a function of a control signal as taught by Cross so as to provide a touch screen display system has a durable, transparent touch sensor for detecting the touch location accuracy.

As to claim 2, Palalau teaches the display is configured to display information relevant to operation of a motor vehicle (see Figs. 2b, 9a-9d).

As to claims 4, 5, Fig. 1B of Cross teaches the actuator layer is concavely deformable.

As to claim 6, Cross teaches the actuator layer is transparent ([0035]).

As to claim 11, Cross teaches the actuator layer is statically deformable at least for a duration of the control signal ([0009], [0034]).

As to claims 12, 13, Figs. 9a-9d of Palalau teaches the display or an area of the actuator layer is configured to receive entry of user input.

As to claim 16, Cross teaches the actuator layer is deformable by pressure with a force that exceeds a limit value (([0009], [0034]).

As to claims 17, 18, Palalau as modified by Cross teaches a commutating device configured to deform the actuator layer in accordance with the control signal at a point of contact of the actuator layer touched by the user or to deform the actuator layer at the point of contact only in response to an input via the display by the user by touch at the point of contact as claimed.

As to claim 19, Figs. 9a-9d of Palalau teaches the actuator layer is configured to produce an operating element.

As to claims 20-22, Palalau teaches the display device is provided in the steering wheel or passenger compartment of a motor vehicle.

7. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palalau and Cross, and further in view of Tannenbaum et al (US. PAT. NO. 5,252,951 hereinafter Tannenbaum).

Cross teaches the control signal is a finger touch or a conductive stylus. Palalau as modified by Cross does not disclose the control signal includes optical signal, electrical field or an electromagnetic field. However, Tannenbaum teaches the touch input device having control signal including optical signal, electrical field or an electromagnetic field (col. 1, line 57 to col. 2, line 25). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the control signal of Palalau as modified by Cross to include optical signal, electrical field or an electromagnetic field taught by Tannenbaum thereby locating the position of the action on the touch screen desired by the user.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palalau and Cross, and further in view of Mulligan (US. PUB. NO. 2004/0017362).

Palalau as modified by Cross does not disclose the actuator layer includes a sol-gel. However, Mulligan teaches a touch sensor device comprising a sol-gel ([0029]).
Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the actuator layer of Palalau as modified by Cross to include a sol-gel as taught by Mulligan so as to protect the sensor bars of the touch sensor from damage due to a touch.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palalau and Cross, and further in view of Rosenberg (US. PAT. NO. 6,429,846).

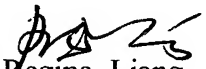
Palalau as modified by Cross does not disclose the actuator layer is controllable by haptic feedback. However. Rosenberg teaches a touch sensor device is controllable by haptic feedback

(col. 1, line 65 to col. 2, line 19 for example). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the actuator layer of Palalau as modified by Cross to be controllable by haptic feedback as taught by Rosenberg since the haptic sensation output on the touch control enhance interactions and manipulations in a displayed graphical environment or when controlling an electronic device.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard, can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Regina Liang
Primary Examiner
Art Unit 2674

12/9/05